

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 3/31/23

Air Quality Forecast: This is the daily forecasted Air Quality Index (AQI) for each area provided by the PA Department of Environmental Protection. The AQI is based on PM2.5 or Ozone, whichever is forecasted to be higher.

Forecast Period	Pittsburgh Area	Liberty-Clairton Area
Today Friday 3/31/23	PM2.5 Moderate 54 AQI	PM2.5 Moderate 60 AQI
Tomorrow Saturday 4/1/23	PM2.5 Good 30 AQI	PM2.5 Good 35 AQI




Today's Forecast:

A moderate inversion will persist Friday morning, allowing for elevated PM2.5 readings. Particle concentrations will drop during the late morning and afternoon with increasing southwest winds and the likelihood of periods of rain. Therefore, PM2.5 averages for the day will remain in the moderate range. A very windy Saturday with showers and a thunderstorm are expected, along with possible gusts over 50 mph. Turning much cooler Saturday night into Sunday behind the front with snow showers possible late Saturday night.

See Page 2 for the Air Quality Index guide

[Data provided by the PA Department of Environmental Protection](#)

ACHD Air Dispersion 36-Hour Forecast: This is the dispersion forecast for Allegheny County starting from this morning through tomorrow afternoon. The atmospheric dispersion index is a rating of the atmosphere's ability to transport pollution away from its source and is based on emissions and weather. Better atmospheric dispersion can improve air quality.

Forecast Period		Atmospheric Dispersion Index	Surface Inversion Strength	Wind (dir mph)
Today	 Morning	30 – Fair	Strong	S 10-15
	Afternoon	45 – Generally Good	--	S 15-25 Gusts 30-35
Tonight	 Evening	23 – Fair	--	S-SW 20-25 Gusts 35-40
	Overnight	39 – Fair	--	S-SW 25-30 Gusts 35-50
Tomorrow	 Morning	91 – Good	--	S-SW 15-30 Gusts 30-50
	Afternoon	150 – Very Good	--	SW-W 30-35 Gusts 40-50

See page 2 for the Atmospheric Dispersion Index guide and the daily Surface Temperature Inversion Report.

ACHD Remarks:

A high wind watch is in effect for the area from 8 a.m. EDT Saturday until 8 p.m. EDT Saturday with gusts anticipated to reach over 50 mph. Significant potential for precipitation from early to late afternoon on 3/31/22 and through our the early morning of 4/1/23.

Data provided by the National Weather Service (NWS) [Fire Weather Planning Forecast](#) and [PIT NWS Products](#)

Guide to the Air Quality Index (AQI)

Color	Description	Meaning	AQI
Red	Unhealthy	Everyone should limit exertion outdoors.	151 - 200
Orange	Unhealthy for Sensitive Groups	Sensitive people should limit exertion outdoors.	101 - 150
Yellow	Moderate	Extremely sensitive people may wish to limit outdoor exertion.	51 - 100
Green	Good	No health impacts are expected in this range.	0 - 50

Guide to the Atmospheric Dispersion Index

Very Poor	Poor	Generally Poor	Fair	Generally Good	Good	Very Good
1 - 6	7 - 12	13 - 20	21 - 40	41 - 60	61 - 100	> 100

ACHD Surface Temperature Inversion Report:

This is the 7 AM surface-based temperature inversion report for Allegheny County.

This morning's inversion of **5.8°C** with a depth of **379 m** is estimated to break at **11:00 AM**.

This inversion can be characterized as: None / Slight / Weak / Moderate / **Strong**.

There is an inversion above ~1000 meters reported.

What does the Surface Temperature Inversion Report mean?

A surface temperature inversion is a weather pattern that stops mixing of the air near the ground, and pollution released into the air tends to remain at higher concentrations.

Surface temperature inversion conditions include how strong the surface inversion is (in °C), how high the inversion is above the surface (in meters), and when the inversion is expected to break (in Eastern Standard Time). Also included is whether an upper-level inversion or inversions exist, starting at about 1,000 meters.

Surface Temperature Inversion Characterization

0-0.9 C°: Slight

1-2.9 C°: Weak

3-4.9 C°: Moderate

≥5 C°: Strong

